Renewable Energy Transition

SuSe 2022

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Essay instructions — From: 02.06.2022 — Until: 31.07.2022

1 Essay instructions

1.1 General

For the final task we ask you to write an essay on a topic related to the lecture. An essay (from French 'to try' or Latin 'to investigate') is a type of written work where you lay out your thoughts on and arguments for or against a topic.

The essay will count towards your final grade. The essay has to be uploaded to the ILIAS essay folder (link) as an PDF file by 31.07.2022.

1.2 Do I need to work alone?

Yes, the essay is a work researched and written by yourself. Writing the essay in a team or having someone else write your essay is not permitted and will be reported as an attempt to deceive to the universities examination office with potentially severe consequences for your studies.

What you may do — we actually encourage you to do so — is to ask friends/fellow students/family members for feedback on your essay and to exchange ideas with others. Ask for critical feedback and use it to improve your essay before handing it in.

1.3 How will the essay be graded?

The essay will grade based on

- the quality with which you reflect on the essay's topic
- your line of argument
- the consistency of your arguments and the essay
- how concise your essay is written

1.4 What makes a good essay?

A good essay follows a clear structure to address a specific question or topic. The title of your essay should be formulated as a question or statement which you then address in the essay. It requires a stringent train of thought and well thought through line of argumentation instead of consisting of a number of loosely connected definitions or arguments.

The aim of the essay is for you to reflect on the essay's topic with the help of your knowledge. The aim is not to show how much you know or how many details and sources you can find on a topic.

For your essay you can use scientific literature, any content from this lecture and the knowledge you bring with you from your previous studies or work experience.

1.5 Where do you get your topic from?

Select an essay topic related to your own seminar talk, i.e. a topic you are already familiar with and have researched.

Please coordinate with the other members in your seminar talk group, you must all choose different topics.

1.6 Expected structure

We expect your essay to be structured in the following way

Title and subtitle The title of your essay. As a subtitle include your personal information: name and matriculation number.

Introduction In this part you set the tone for your essay. Briefly and with few words you should grab the attention of the reader and make clear what the reader should expect. Use this part to pique the interest of the reader. Provide background on your topic and what the ongoing debate on the topic is if there is one. Include the specific question you will be discussing and how / from which perspective you will be doing so. If necessary you can briefly detail the structure of your essay.

As the introduction does not contain any details on your essay but rather sets the tone for it, it is often best to only write the introduction after finishing with the main part and summary.

Main part In the main part of the essay you bring forth arguments, facts and ideas which you use to answer your essay's question. Bringing forth means presenting the information, interpreting the information and analysing it. It is okay if some of the information is subjective — in this case you need to put it into perspective. Make sure you are not only presenting information which suits your own opinion but reason for your arguments or at least make them plausible.

Summary Here briefly repeat the most important aspects of your essay. Do not repeat everything in this section. Do not introduce new ideas, aspects or arguments. Close the loop to your essay's question and give a concluding reflection. You can finish by indicating relations to linked topics or including a future outlook.

References Here include the references you used and cited in your essay. Citations have to follow common rules on proper citing. Properly indicate your sources and if you cite directly do specifically indicate so.

1.7 Example

Here's a short imaginary example for choosing a seminar topic and a rough sketch on what the essay structure for this topic could look like.

The original seminar talk was about: 'The role of Carbon Capture in a future energy system.'.

Based on that seminar talk topic, the following topic related to the seminar talk was selected: If we don't use fossil energy in the future and do not have waste CO_2 from burning the fossil fuels, then we might lack a supply of CO_2 for industry especially the food and beverage industries. The essay topic is choosen to be 'Why is Carbon Capture essential for a sustainable beer production in the future?'.

The individual parts in the essay could then be:

Introduction Introduction to the problem: no fossil fuels burned in the future. But fossil fuels are a major source of CO_2 for food and beverage industry. Especially the breweries producing beer require CO_2 without which most beers will taste worse in the future. Also in the future there will be the need for Carbon Capture technologies to reduce the amount of CO_2 in the atmosphere.

Main part A discussion of alternative sources of CO_2 and alternatives to Carbon Capture technologies. The discussion includes the amount of CO_2 required by the food and beverage industry every year world wide. The discussion concludes that there are good alternatives of using CO_2 in this industry today. The only sustainable solution is thus using captured carbon from the atmosphere in those industries.

Summary Carbon Capture technology will be used for different industries in the future. Food and beverage industry is an important sector which will need this technology as other sources of carbon are not sufficiently available. Personal opinion: This aspect should be highlighted more in public discussions and brought to attention of the general public. In the future maybe alternatives to CO_2 can be found, some beers today use nitrogen instead of carbon dioxide which could be explored further to become a world-wide alternative.

References References.

1.8 Length and formatting requirements

As an orientation you should aim for a length of 2000 words. Your essay will not be rated based on the word count. If you are satisfied with your essay, you believe it is concise as it is but it has less than 2000 words, then that is fully acceptable. Identically if you need a few words more than 2000 words in order to finish your essay, then that is also fully acceptable.

The formatting requirements for the essay are stated on the next page. Deviations from the required formatting can lead to a reduction of your essay grade.

1.9 Where can I get help?

You can help through the usual channels. If you want to ask whether your choosen topic is adequate or whether the essay content you are planning for are reasonable, please visit the weekly open office hour.

Important: Between 15.07.2022 and 31.07.2022 there will be no support available via ILIAS/eMail/virtual office hour. Make sure to prepare sufficiently to ask all relevant questions before that period.

Centred & Bold in 18 pt font size: Your Essay title

Centred in 11 pt font size below: Your name and matriculation number

Page margins

2.5 cm (top/bottom, left/right)

Footer

Pager number

Text

- Font size 11 pt
- Use as font either Calibri or Arial (or any other sans-serif font)
- Heading in bold text
- Single-column text
- Justified text (not left-aligned)

Tables and figures

- Horizontally centred on the page
- Must always carry a caption
 - o Tables: Caption above the table
 - o Figure: Caption below the figure
- Must be referenced in the text at least once (rule of thumb: If you don't need to refer to a
 figure or table in the text, then you don't need the figure or table. If you don't need the figure
 or table, then remove it from the document)

Spell checking

 Please use the built-in spell checking functionality of Word / Google Docs / Pages / ... before you hand-in your document

References

- Golden rule: References must be unambiguous. With the information given on a reference the original work has to be identifiable without ambiguity
- You can use whatever citation style you prefer
- Whatever citation style you use: Use it consistently. Only use one style to indicate references, do not mix styles.